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疫苗接种等疫情应对进程差异将导致今年全球经济复苏分化

--2020 年全球主要经济体表现及 2021 年经济复苏格局展望

- 疫情给各国造成的 GDP 损失与其应对措施的严格程度密切相关。
在下文覆盖全球 GDP 总量 81% 以及全球人口 62% 的研究样本国家中，除极少数例外，大多数国家的数据表现遵循此规律。2020 年，疫情封锁和限制性隔离措施给主要经济体平均带来 7.1 个百分点的 GDP 损失。各国不同的经济走势主要源于经济结构及防控隔离措施严格程度差异。
- 交通运输业、建筑业、采矿业和服务业，是受疫情负面冲击较为显著的行业。零售业和制造业在 2020 年下半年表现出不同程度的反弹，总体来看与前述行业相比受影响较小。
- 2020 年，全球大多数国家几乎一致开展了防疫隔离行动。主要经济体在过去一年的全年时间里，几乎都实施了与新冠疫情相关的限制措施。限制力度在夏季达到最低点，而后伴随秋季的第二波疫情反弹回到更高水平。数据显示，2020 年第一波疫情期间，多数国家在 4 月份采取了最严格的隔离措施。
- 疫苗接种在全球不均衡的现象料将延续，这将对全球经济复苏造成不利影响。世界范围内第三波疫情仍有发生可能，尤其对没有接种疫苗和未实现群体免疫的国家，或造成较大负面影响。由于不同国家的疫苗接种进度差异，部分国家实现群体免疫的时间可能推迟，未来全球经济复苏和财政整顿步伐料将继续分化。

关于疫情对全球重要国家经济活动和公共财政的影响，东方金诚和战略合作伙伴俄罗斯 ACRA 将发布系列联合研究。本文属于该系列研究的第一部分。另请参阅东方金诚和 ACRA 关于中俄债券市场的联合研究报告。（[1](#), [2](#), [3](#)）

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各国 GDP 总体损失情况几乎无一例外与应对疫情措施的严格程度密切相关

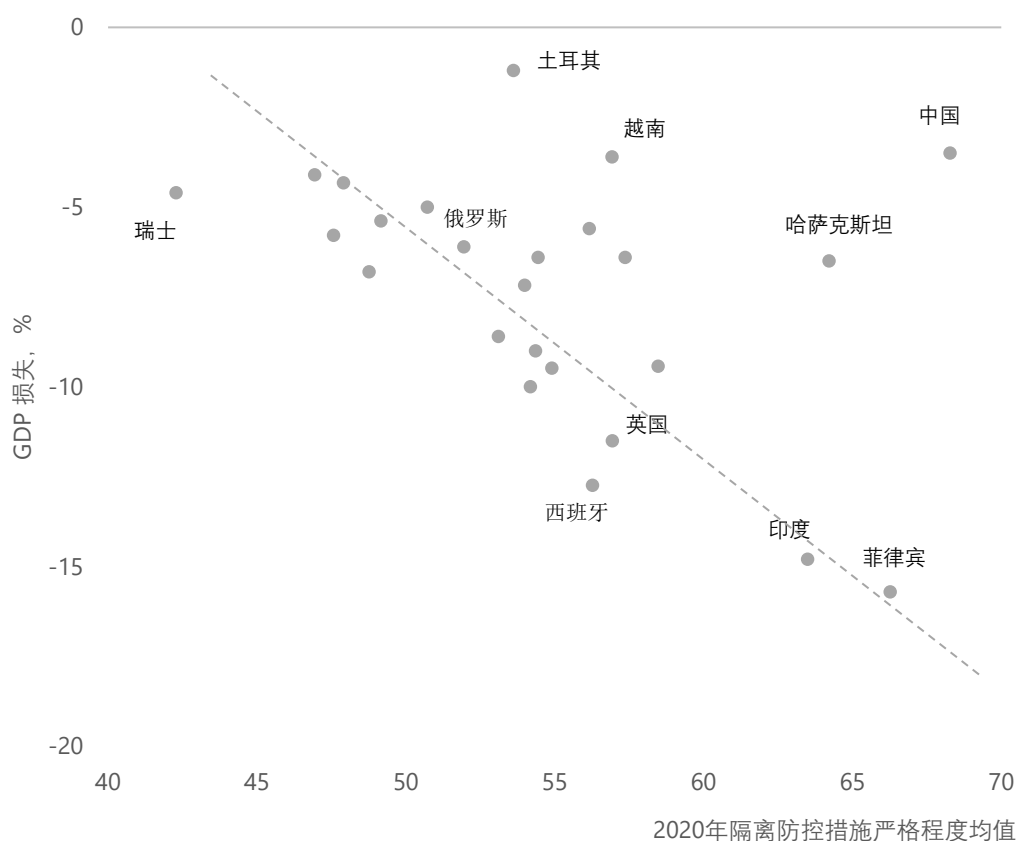
除个别国家外，疫情危机几乎是造成全球大多数经济体 2020 年 GDP 严重损失的最主要单一因素。这一因素对各国的经济冲击，主要源于防控疫情的限制性隔离及封锁措施，对几乎所有国家的经济部门均产生了显著负面影响。

大多数国家采取的主要防疫措施是对人口实施隔离和交通限制，其导致的消费和供给急剧减弱成为疫情冲击经济的主要渠道。我们注意到，除必需商品和服务外，市场对其他消费品和服务的需求下滑导致生产和服务供应商产出下降，中间产品需求亦明显收缩。

我们采用了全球 27 个经济体作为研究样本。样本涵盖了全球十大经济体、欧盟十大经济体、金砖国家、亚洲十大经济体以及部分具有代表性的独联体国家。样本国家覆盖了全球 GDP 的 81% 以及全球人口的 62% 左右。

本文中，GDP 损失指的是 IMF 预测的 GDP 增速与 2020 年实际增长率之间的差值。

图 1 2020 年抗疫措施的平均严格程度与绝大多数国家 GDP 损失具有明显关联



资料来源：各国统计当局，东方金诚和 ACRA 计算

除个别国家外，大多数国家的经济损失或多或少与强制隔离措施的严格程度保持一致(图 1)。数据显示，尽管隔离措施较为严格，但中国、土耳其、越南和哈萨克斯坦这四个国家遭受的经济损失要比其他国家小得多，而瑞士尽管防疫限制要求相对宽松，经济萎缩程度却明显偏离均值。

根据样本各国官方公布的 2020 年实际 GDP 增速数据（个别暂未公布全年数据的国家，采用估算数值）与采取防疫隔离措施前预测经济增速之前的差异，我们可以估算 2020 年由于新冠疫情相关限制措施造成的 GDP 损失。

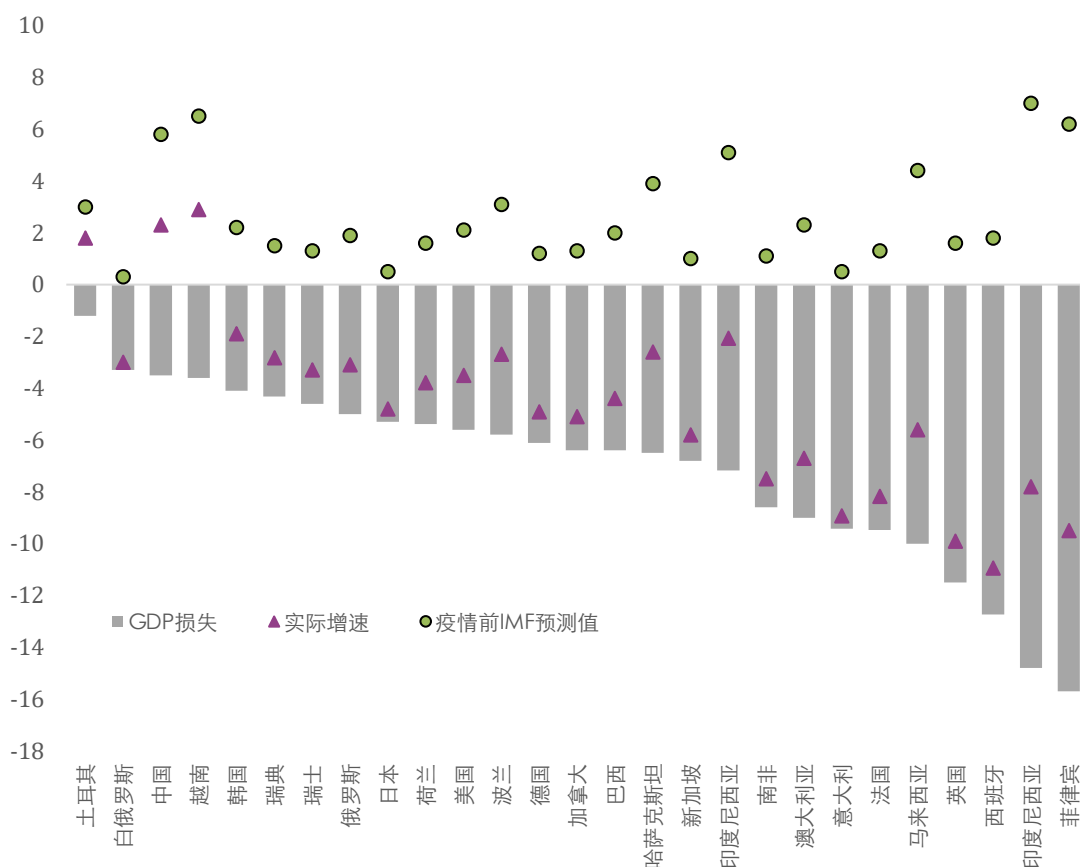
值得一提的是，上述四个 GDP 损失低于均值的国家中，越南(2.9%)、中国(2.3%)和土耳其(1.8%)三个国家尽管 2020 年全年经济增速低于年初预期，但仍实现了正增长，而哈萨克斯坦国内生产总值则下降 2.6%。总体来看，虽然这些国家的经济快速发展步伐去年有所收敛，但经济损失仍明显低于其他国家。

中国经济在 2020 年经历了前所未有的挑战后仍实现了正增长，主要得益于其对新冠肺炎扩散的高效遏制、其他经济体对中国特定商品的外部需求、针对基础设施投资的财政刺激，以及高度发展的电子商务市场；对土耳其而言，相对廉价的低利率信贷被大量注入经济，在一定程度上掩盖了防疫隔离措施的负面冲击；就越南而言，有效遏制疫情蔓延、制造业的扩张，以及与欧盟签署的自由贸易协定，均对其维持国内生产总值增长发挥了重要作用；而哈萨克斯坦经济损失较小的原因主要是制造业的增长，特别是新生产设施的投入(如汽车部门)，以及政府对建筑业的支持。

与样本中的其他国家相比，瑞士政府实施的疫情封锁限制措施并不严格，其因抗疫而造成的损失高于预期，主要与其易受外部冲击的小型开放经济体特征有关。不过，单就 GDP 损失而言，瑞士与作为其主要贸易伙伴的其他欧洲国家相比，国内生产总值下滑并不明显。

从估算结果来看，2020 年，疫情给主要经济体平均带来 7.1 个百分点的 GDP 损失。图 2 数据显示，各国经济损失幅度存在较大差异一部分国家成功实现了 GDP 正增长，而部分经济体损失程度显著高于均值。样本国家中，经济损失幅度最大的国家是印度(-14.8%)、菲律宾(-15.7%)、西班牙(-12.7%)和英国(-11.5%)。与此同时，这些国家抗疫限制措施的严格程度也在最高之列(图 1)。

图 2 各国 2020 年 GDP 下滑幅度存在较大差异



资料来源：各国统计当局，IMF，东方金诚和 ACRA 计算

从图 2 可以看出，主要经济体中，早期受疫情冲击的西欧国家由于病毒持续蔓延传播，全年大部分时间将处于疫情负面影响之中，因此 GDP 损失较为明显。这些国家中，除瑞典在 2020 年上半年一直没有采取封闭隔离等防疫措施外，其余大部分采取了严格的防疫隔离举措。

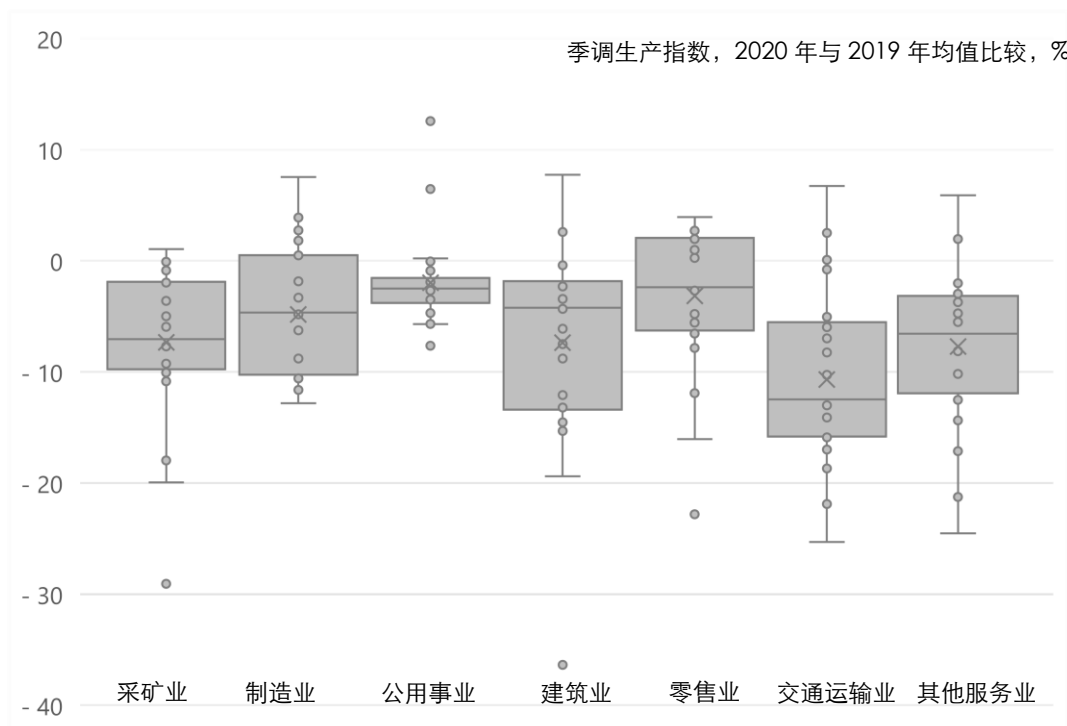
实际 GDP 增长数据显示，东亚国家总体上在疫情初期防控方面成果较为显著。东欧和独联体国家由于防控疫情方面的中等表现以及与西欧国家的经济结构性差异——西欧国家服务业占比更高，全年 GDP 增长表现大多处于所有研究对象的中部区间。

就经济活动而言，与 2019 年相比，2020 年总体上受到负面冲击最大的行业（图 3）主要是交通运输业（-10.7%）、建筑业（-7.4%）、采矿业（-7.4%）和服务业（-7.7%）。制造业和零售业尽管也受到了防疫限制措施的冲击，不过 2020 年下半年，这两大行业在各国均有不同程度反弹。

此外，由于欧佩克+相关国家限产协议的达成，自 2020 年 5 月开启的减产对石油和天然气主要出口国造成一定影响，在其矿业、石油产品制造业以及批发交易额等数据中有明显体现。

图3 用箱形图展示了不同行业的生产指数分布情况。十字叉表示均值，矩形内的横线表示中位数，矩形表示分布中的上、下四分位数。每个圆圈代表一个国家。

图3 抗疫隔离措施影响下，交通运输行业总体上受到的负面冲击最为显著



资料来源：各国统计当局，IMF，东方金诚和 ACRA 计算

零售业表现与隔离措施的严格程度具有一定关联。2020 年第一波疫情期间，部分国家最严格防疫措施的执行一度导致了约 50% 的零售业交易萎缩，而采取中等强度隔离措施的国家中，部分将零售交易下滑程度控制在了个位数，甚至个别国家未现明显收缩。而在第二波疫情冲击下，零售业的衰退幅度未有第一波期间显著。

在其他行业中，制造业也是较易受到影响的行业之一。其中，受疫情冲击影响较小的国家大多拥有特殊的制造业特征（例如新加坡），主要领域（例如生物医药和制药）表现几乎不受新冠疫情的影响。事实上，尽管 2020 年各国制造业的平均表现并不令人乐观，但在第二波疫情冲击期间，多数国家已在不同程度上恢复了制造业活动。

统计数据显示，样本中受防疫隔离措施影响较大一潜在经济损失高于平均水平的国家主要具有以下四方面结构性特征：

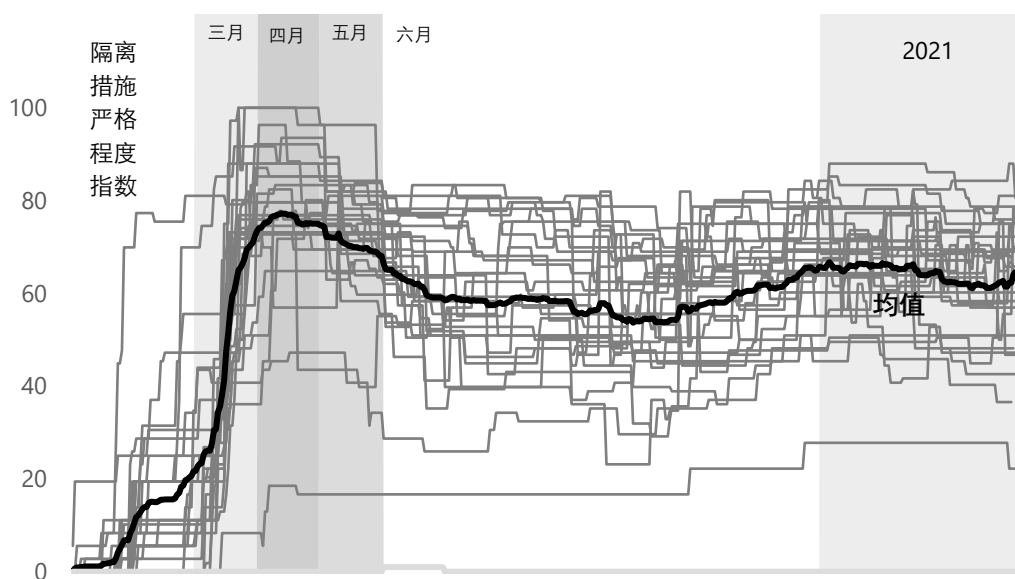
- 对外来旅游依赖度较高，在国际收支中通常表现为具有较大外部旅游资金净流入的国家（例如西班牙）；
- 医疗救治能力不足或医疗服务资源分配不均的国家，通常死亡率更高，需要采取更严格和趋于长期的隔离举措（例如英国、巴西、意大利）；
- 制造业中投资性商品生产更多的国家（例如德国、瑞士）；
- 零售贸易和金融服务的线上渗透及运用较低的国家。

部分样本国家得益于成功的应对政策、特殊的经济产业结构和出口结构，抑或较为宽松的政府抗疫管控措施，这些因素对冲了部分潜在经济损失。

新冠疫情关键节点回顾与防疫应对措施分析

2020 年 3 月 11 日，世界卫生组织宣布新冠肺炎疫情具备“大流行”特征。在随后的十天里，诸多国家报告了感染病例，多数国家积极采取了限制性措施以遏制病毒传播。至 3 月 20 日，超过 100 个国家的限制措施严格程度达到了牛津大学新冠疫情政府响应追踪系统（Oxford COVID-19 Government Response Tracker）中的 50 分以上。也就是说，大量学校关闭，公共集会、旅行和交通活动受到严格限制。4 月中旬，该指数均值达到疫情发生以来的阶段性高点一攀升至 80 附近（图 4）。

图 4 大多数国家在 2020 年 4 月采取了最严格的隔离措施



资料来源：牛津大学新冠疫情政府响应追踪系统，东方金诚和 ACRA 计算

伴随疫情趋稳，6 月下旬后，越来越多国家开始明显放开限制措施。不过，随着 2020 年秋季之后——尤其是 10 月之后第二波疫情的出现，大多数国家开始恢复限制性措施。德国、英国、荷兰等欧洲国家，更是由于变异毒株引发的新一轮疫情恐慌和担忧，自 2020 年底以来显著提高了与防疫有关的限制措施严格程度。

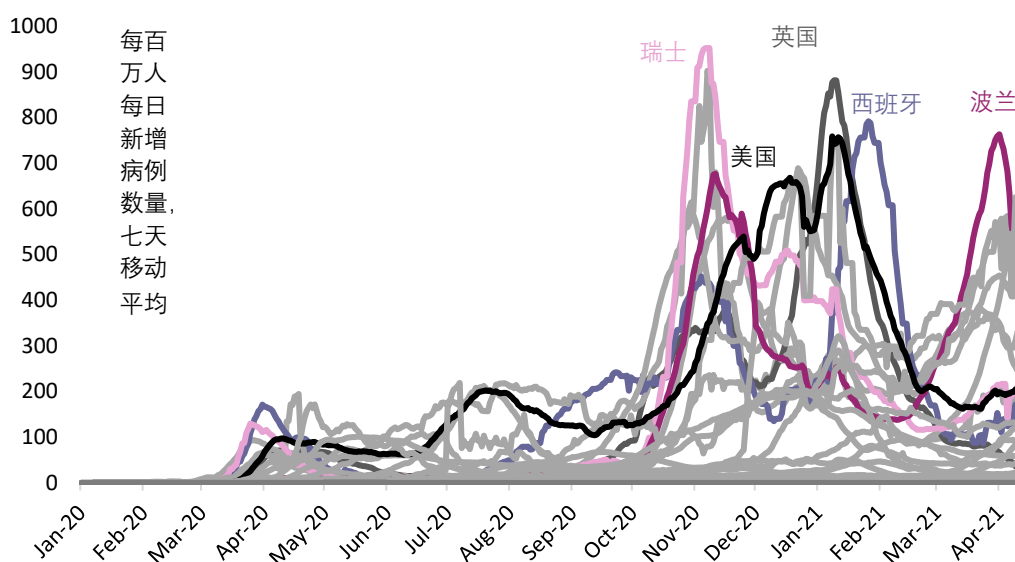
疫苗接种进程可能导致各国 2021 年经济复苏表现有所差异

2020 年秋季第二波疫情爆发期间，感染病例数量曾急剧增加。在研究样本国家中，受影响最大的国家包括瑞士、英国，以及西班牙（图 5）。尽管与 2020 年上半年相比，第二波疫情期间防控措施的严格程度有所降低，对经济的负面冲击有所减轻，但与此同时，抑制病毒传播的条件也在放松。

2021 年 2 月以来，多数国家新增感染病例数量大幅减少，由此我们推断第二波疫情已接近尾声。不过，由于诸多国家疫苗接种率依然较低，全球范围内的群体免疫仍困难重重，加之病毒变异带来的影响，欧洲、印度等经济体正有第三波疫情趋势，未来全球范围内疫情演变仍存在变数。

尽管各国之间的新冠疫情统计数据存在差异，尤其是各国病例检测对人口的覆盖范围不同，因此进行跨国比较实际上存在一定困难，但我们认为，各国确诊病例数量与病毒传播情况具有一致性。

图 5 新增病例数据显示，第二波疫情严重程度远超预想



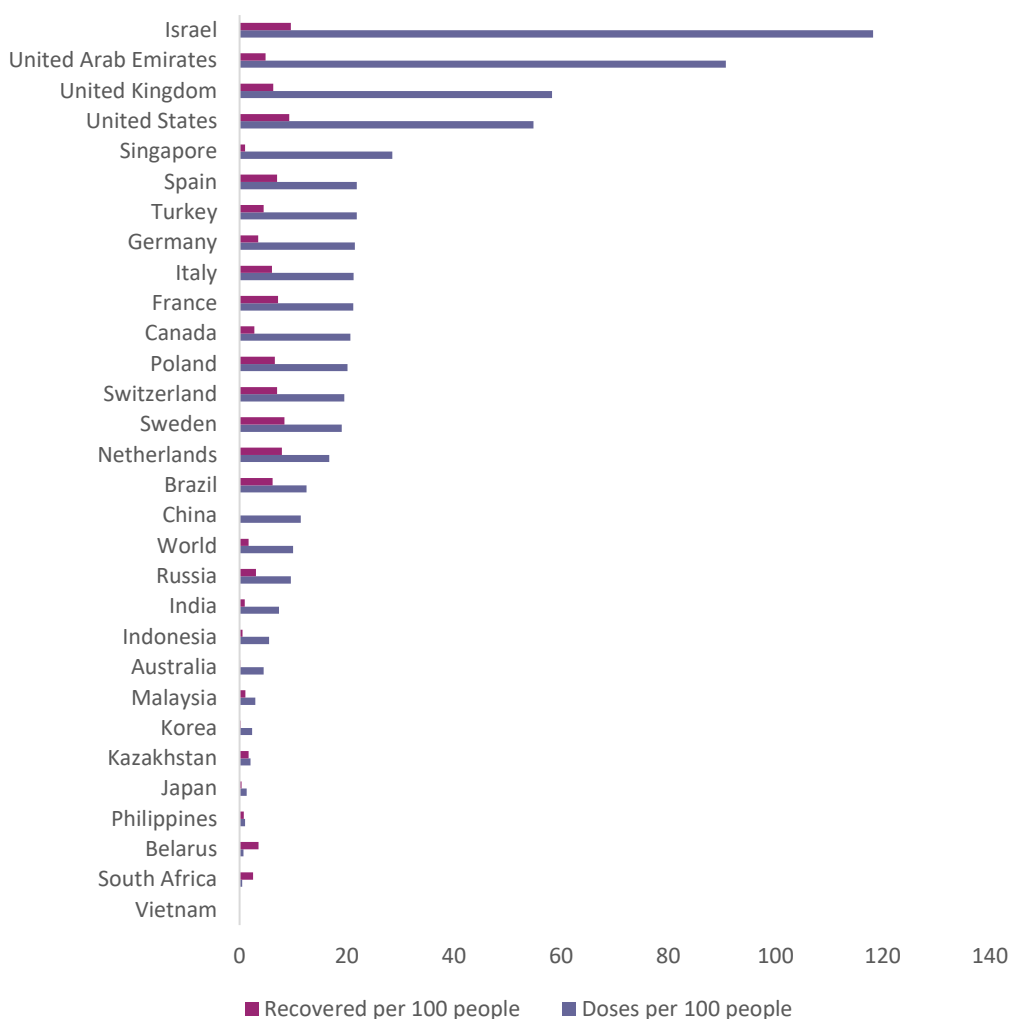
资料来源：牛津大学“用数据看世界”，东方金诚和 ACRA 计算

按目前全球新冠疫情及疫苗接种情况而言，讨论终结疫情为时尚早。截至 2021 年 4 月 10 日数据显示，以色列和阿联酋的新冠疫苗接种比率处于世界领先地位，分别达到每百人 118 剂和 91 剂。

研究样本国家中，截至 2021 年 4 月 10 日数据显示，英国和美国接种比率与全球领先者的差距较小，分别是每百人 58 剂和 55 剂（图 6）。不过，全球平均接种比率仅为每百人 10 剂，远未达到解除疫情封锁措施所需的接种水平。领先国家与平均接种率之间的差距，主要是由于疫苗接种进度不同，而这取决于民众对可用疫苗的信任、人口规模，以及疫苗供应的充足性。

图 6 研究样本中，英国和美国的疫苗接种比率处于领先地位（截至 2021 年 4 月 10 日）

以色列和阿联酋的疫苗接种率显著领先，不过，这两个国家均不在我们的研究样本中。



资料来源：牛津大学“用数据看世界”

考虑到目前多数国家的疫苗接种进度，在接种进展缓慢的国家，不排除将出现较前几次更为严重的疫情的可能。接下来，各国人口抵御新冠病毒的能力或表现出差异，我们预计 2021 年，各国隔离措施的严格程度也会存在较大不同，在全球范围内一致开展防疫隔离行动的可能性不大。各国的经济反弹表现，与如何遏制疫情对经济的冲击有关，这将在很大程度上取决于疫苗接种进展，因此可能引发今年全球不均衡的经济复苏格局。

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Vaccination as a factor for an uneven recovery

The world's leading economies will recover differently following across-the-board GDP declines

- **The overall GDP loss strongly correlated with the strictness of counter-pandemic measures.** This is true for the majority of countries, which together represent 81% of global GDP and 62% of the world's population, bar some exceptions. On average, lockdowns and restrictive measures resulted in 7.1 pp of GDP contraction, with variations depending on countries' economic structures and the severity of quarantine measures.
- **Among the most affected sectors were transport, construction, mining, and services.** Less affected were retail and manufacturing, which rebounded to a varying extent during the second half of 2020.
- **The majority of countries imposed quarantine measures in a coordinated manner.** Coronavirus-related restrictions were in place during almost all of 2020 in major economies, reaching their lowest point in summer and then bouncing back to a higher level in terms of severity when the second wave of COVID-19 began in autumn. During the first wave, April was the month with the strictest quarantine measures in most of the countries.
- **Vaccination programs are likely to be implemented in an uneven manner and with harmful implications for the economies.** A third global wave of the coronavirus pandemic is quite possible, and it may be more harmful for countries which have a slower pace of vaccination and are further away from reaching herd immunity. The different pace of vaccination globally may delay the formation of herd immunity in some countries, making future economic recovery and budget consolidation highly uneven.

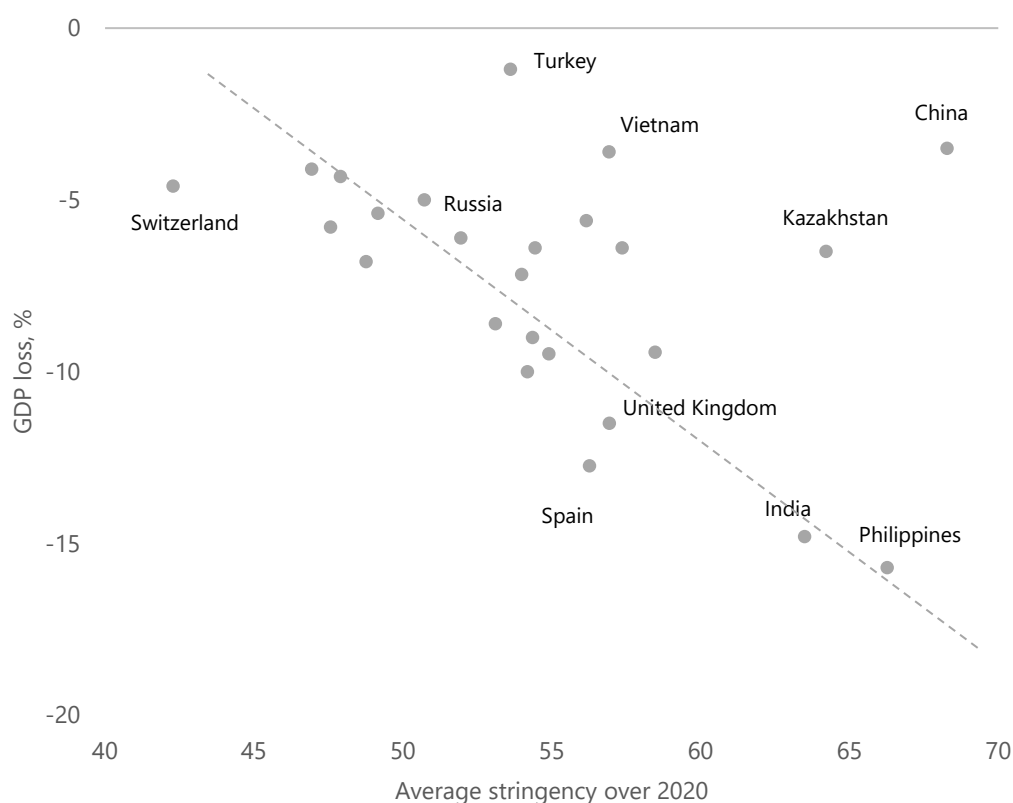
ACRA and Golden Credit Rating plan to publish a number of joint research papers covering the impact of the COVID-19 pandemic on economic activity and public finance. This is the first paper of the series. See also our joint research papers on the structure of the Russian and Chinese bond markets (Parts [1](#), [2](#), [3](#)).

Overall GDP loss strongly correlated with the strictness of the counter-pandemic measures with few exceptions

The unique feature of the 2020 crisis is a single factor that explains the severity of GDP loss in the majority of countries globally, bar some exceptions. This factor is the restrictive measures designed to tackle the spread of COVID-19 that had a significant negative impact on almost all economic sectors.

This impact was mainly felt as a result of reduced consumption and supply, underpinned by self-isolation regimes as one of the major restrictive measures imposed on the population in many countries. Lower demand for consumer goods and services (apart from the essential ones) led to an output contraction among goods producers and service providers. As a result, contractors producing intermediate goods also saw lower demand.

Figure 1. There is a clear relationship between the average stringency of counter-pandemic measures over 2020 and GDP loss with few exceptions



Sources: national statistical offices, ACRA, Golden Credit Rating

For the majority of countries, economic losses were more or less consistent with the stringency of imposed quarantine measures (*Fig. 1*). However, there were some exceptions. Despite having comparably high severity of quarantine measures, four countries — China, Turkey, Vietnam and Kazakhstan — suffered much less economic losses than others, while Switzerland underwent a larger contraction.

We estimated the GDP loss associated with COVID restrictions in 2020 by comparing the difference between the factual (or at least estimated based on the first three quarters) real GDP growth rates for the countries considered in our analysis and the forecasts available before the date when quarantine measures were introduced.

In this research we will describe a sample of 27 countries which represents the top 10 economies in the world, top 10 in the EU, all the BRICS countries, top 10 in Asia, and some of the CIS. This sample of countries covers 81% of global GDP and 62% of global population.

GDP loss is defined as the difference between the real GDP growth rate forecasted by the IMF and the factual growth rate achieved in 2020.

Out of the four countries mentioned above, three — Vietnam (2.9%), China (2.3%) and Turkey (1.8%) — managed to maintain positive growth rates, but at a lower level than initially expected, while Kazakhstan's economy contracted by -2.6%. Economic expansion, though relatively modest, allowed the first three countries to narrow the gap between the GDP expected in early 2020 and the actual indicator.

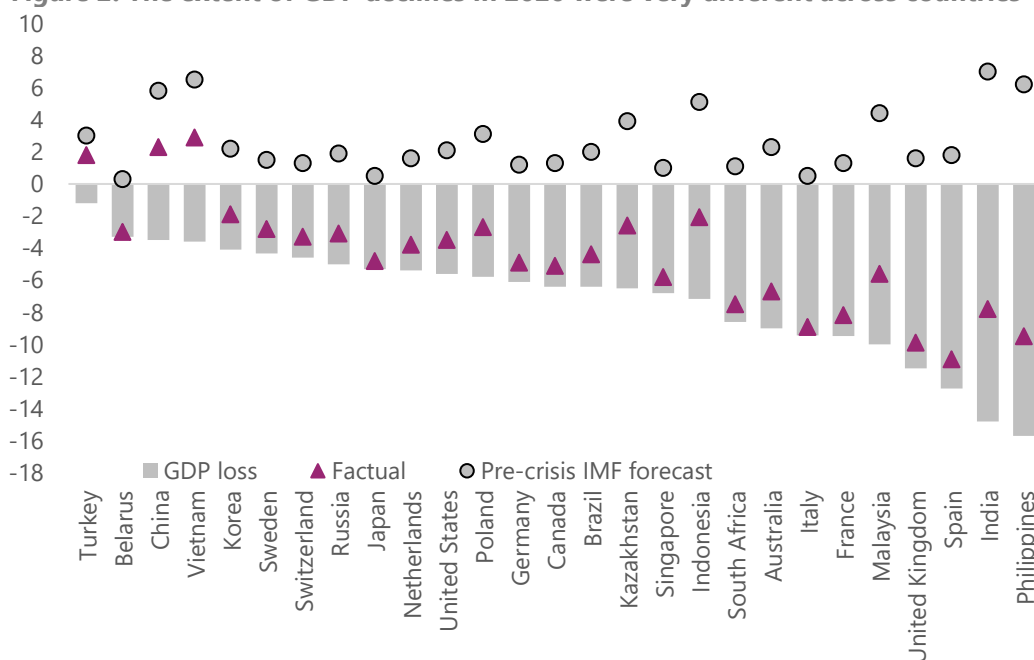
China managed to avoid a fall in GDP thanks to its highly effective containment of the spread of COVID-19, external demand for specific Chinese goods, fiscal stimuli aimed at infrastructure investments, and a developed e-commerce market. In Turkey, relatively cheap credit was massively infused into the economy. This was a countervailing factor for the quarantine measures. In the case of Vietnam, the effective containment of the pandemic's spread and growth in the manufacturing sector, additionally boosted by the free trade agreement which was signed with the EU in summer 2020, played an important role. The smaller losses of Kazakhstan can be explained by the growth in manufacturing industries caused in particular by opening new production facilities (e.g., the automotive sector), as well as the government's efforts to stimulate construction.

Switzerland's higher-than-expected losses explained by quarantine stringency in comparison to other countries in our sample can be attributed to the fact that it is a small open economy susceptible to external shocks. Nonetheless, when compared to other European states, who are its major trading partners, the GDP growth slump of this country is not as sharp.

We have estimated that the average GDP loss in 2020 caused by pandemic-related restrictions was 7.1 pp. This average conceals the extremes: there are some countries that managed to grow despite the economic damage done by COVID-19 as mentioned before, whereas others were hit much harder than the average (*Fig. 2*).

The most harm was inflicted on such countries as India (-14.8%), the Philippines (-15.7%), Spain (-12.7%), and the United Kingdom (-11.5%). These countries had the highest level of strictness of measures imposed out of the countries considered in our sample (*Fig. 1*).

Figure 2. The extent of GDP declines in 2020 were very different across countries



Sources: national statistical offices, ACRA, Golden Credit Rating

Fig. 3 describes the production index dynamics distribution using a candle bar chart. The crosses denote average values; lines within the rectangles denote median values; while the rectangles denote two medium quartiles in a distribution. Each circle represents a single country.

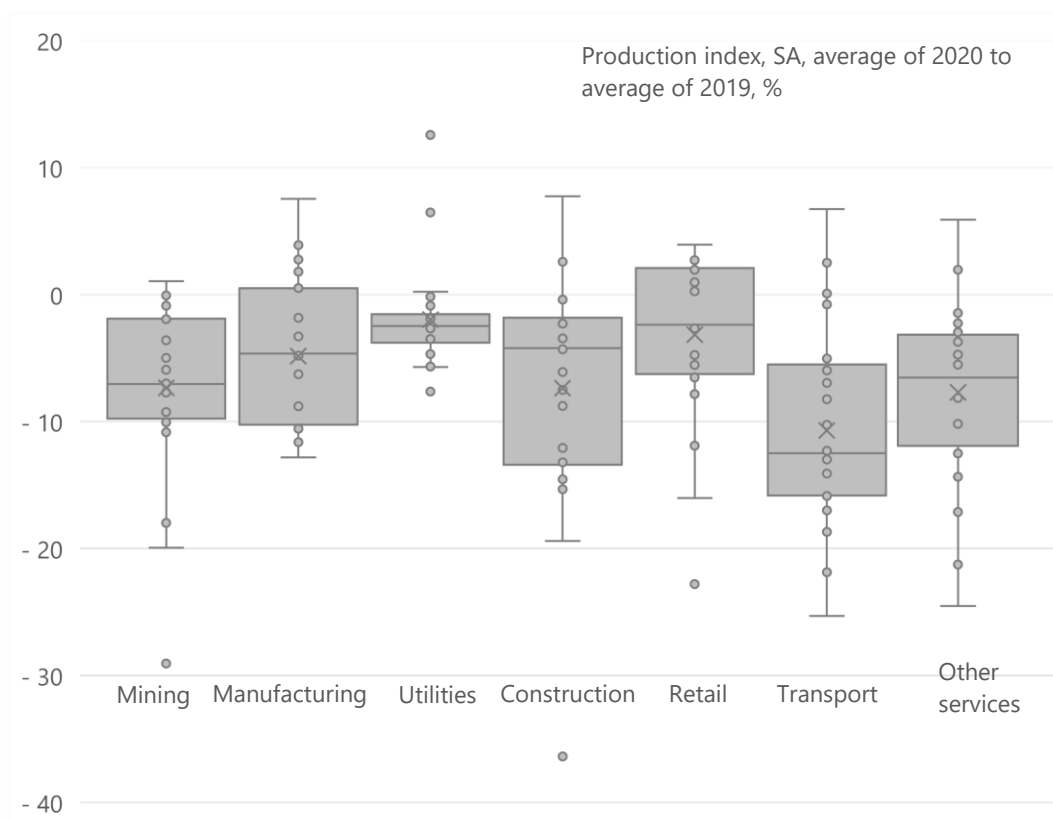
Overall, as can be seen in Fig. 2, Western European countries were hit by the pandemic early and therefore lived with the coronavirus's economic consequences for more of the year, which brought some of them to the upper side of the GDP loss spectra in 2020. In addition, they tended to apply strict quarantine measures, except Sweden with its no-quarantine policy in the first half of the year.

East Asian countries on average were more successful in containing the spread of the coronavirus during the first months of the pandemic, which is reflected in their higher real GDP figures. Eastern European and CIS countries mostly lay in the middle of the spectra, reflecting both average success in containing the disease and economic structure differences compared to Western Europe, where the service sector occupies larger share.

As for economic activities, on average the most affected industries in 2020 compared to 2019 (Fig. 3) turned out to be transport (-10.7%), construction (-7.4%), mining (-7.4%), and services (-7.7%). Manufacturing and retail trade were also hit by the restrictive measures, but they managed to bounce back to a varying extent in different countries during the second half of 2020.

The major oil and gas exporters were hit by the measures imposed by the OPEC+ deal, in particular the curb on oil production starting from May 2020. The repercussions of the deal are reflected in mining sector data, the oil product manufacturing subsector, and the wholesale turnover numbers in these countries.

Figure 3. The transport sector on average suffered the most from quarantine measures imposed over 2020



Sources: national statistical offices, ACRA, Golden Credit Rating

The performance of the retail sector in 2020 reflects to a certain extent the severity of the quarantine measures. During the first wave, the countries with the strictest measures saw an almost 50% contraction in turnover, whereas the countries with an intermediate level of strictness in some cases saw single-digit or even no contraction. However, during the second wave the contraction in the sector was not as striking as during the first one.

Among other sectors, manufacturing was also susceptible to the restrictions. The countries that did not fit this pattern were those with unique manufacturing industry characteristics (for example, Singapore), where the major segments (e.g., biomedicine and pharmaceuticals) were basically unaffected by COVID-19. Nonetheless, during the second wave, most of the countries more or less restored their manufacturing activities, though the average figures for 2020 are still rather negative.

When summarizing available statistics we identified at least four structural features which could have pushed countries' potential economic losses caused by the COVID-19 pandemic above the average:

- Higher than average dependence on external tourism, as reflected in huge positive net external money flows from this activity in the balance of payments (e.g., Spain);
- Inadequate capacity of healthcare facilities or uneven access to medical services, which in most cases led to higher death rates and stricter and longer quarantines (e.g., the United Kingdom, Brazil, and Italy);
- Elevated share of investment-oriented goods produced within a country's manufacturing sector (e.g., Germany and Switzerland);
- Historically low share of online business in retail trade and financial services.

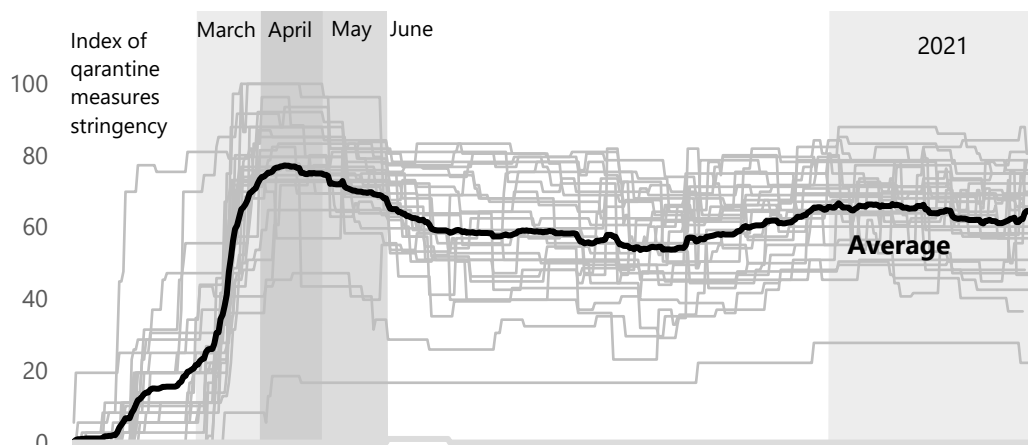
In some cases, potential losses were mitigated by successful policies, fortunate economic or export structure, or less political willingness to curb the pandemic.

A brief history of the pandemic and the counter-pandemic measures

On March 11, 2020, the World Health Organization announced that COVID-19 is a pandemic. Over the next 10 days, the majority of countries actively introduced restrictive measures to curb its spread, since infection cases were reported in almost all of them. By March 20, in more than 100 countries these measures had reached the 50-point mark on the scale of the Oxford COVID-19 Government Response Tracker, indicating that a great deal of public gatherings had been banned, schools were closed, and travel was severely restricted. In mid-April the tracker climbed to around the 80-point mark on average, the highest point reached during the pandemic so far (*Fig. 4*).

From June 22 onwards an increasing number of countries started to relax their restrictive measures. However, a number of restrictive measures have been restored since October 2020 with the second wave of coronavirus arriving in most countries, though the severity of these measures was lower than during the first wave. Moreover, since the end of 2020 many European countries (such as Germany, the United Kingdom, and the Netherlands) have substantially increased quarantine-related restrictions, expecting a third wave of pandemic partly triggered by new strains of the virus.

Figure 4. Last April was the month with the strictest quarantine measures in most of the countries



Sources: Oxford COVID-19 Government Response Tracker, ACRA, Golden Credit Rating

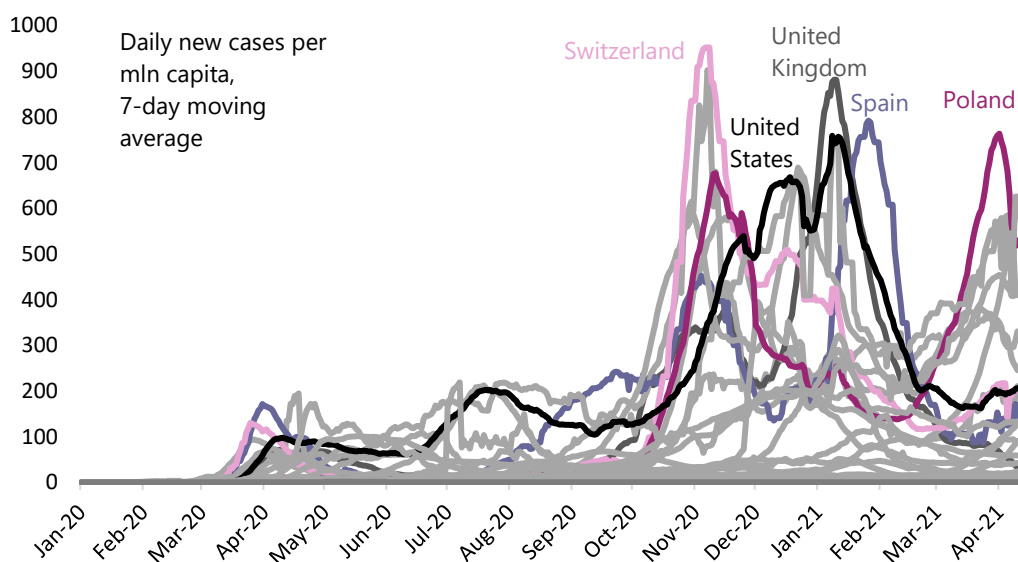
The vaccination process is likely to differentiate countries' economic recovery in 2021

Although the differences in COVID statistics across countries, in particular coverage of the population by various COVID-19 tests, make cross-country comparisons difficult, we believe that within each country the number of the registered cases approximately resembles the spread of the virus.

The number of cases increased dramatically during the second wave of the coronavirus pandemic from autumn 2020 to winter 2021. Among the countries affected the most were Switzerland, the United Kingdom, and Spain (Fig. 5). Nonetheless, the strictness of quarantine measures has been less severe compared to the first half of 2020 and has resulted in less damage to the economy, but at the expense of lower barriers to the spread of the pandemic.

Since February 2021, the number of new cases has considerably decreased, thus allowing us to assume that the second wave is likely to be almost over. However, a global third wave is quite likely in the near future because herd immunity worldwide is still weak due to the low rate of the vaccination process in many countries. As demonstrated by Fig. 5, a number of European countries (such as Poland, Sweden and France) are already experiencing the third wave of the coronavirus pandemic.

Figure 5. The second wave turned out to be much more intense in terms of cases, but the most recent dynamics suggest that it is almost over



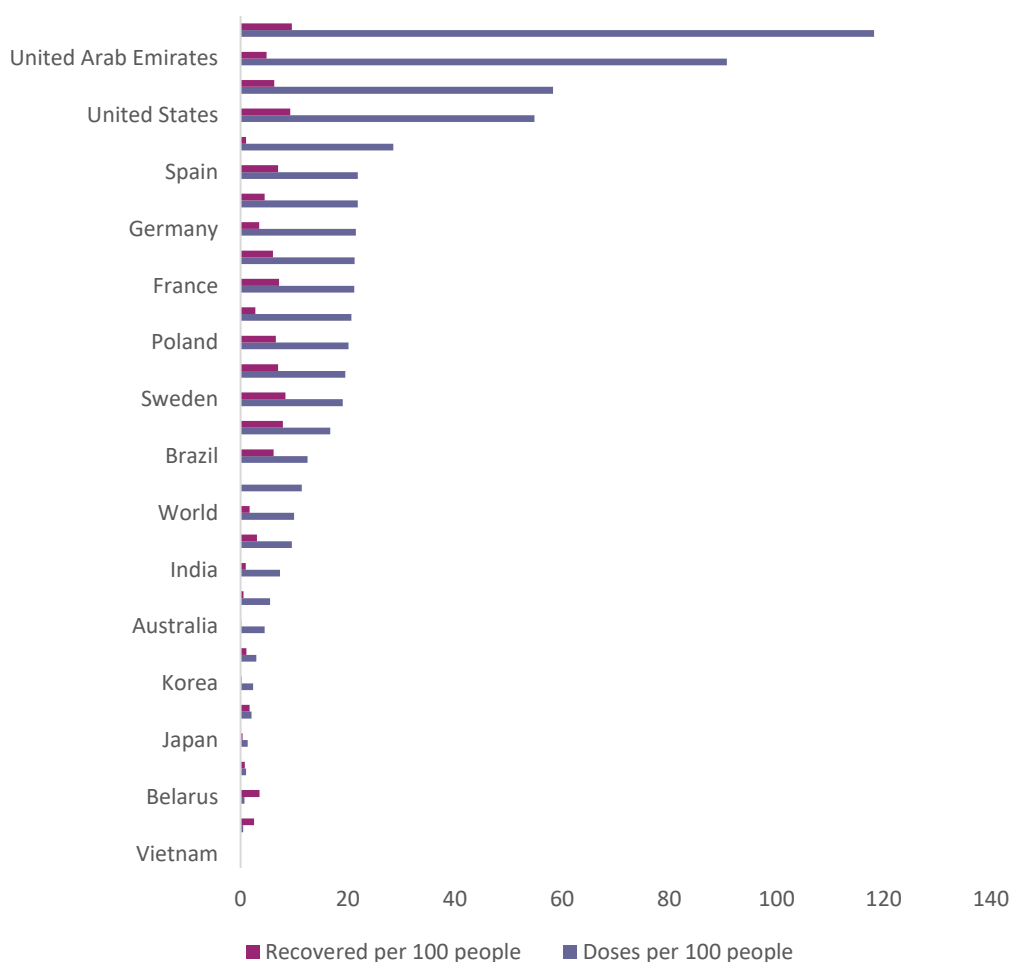
Sources: Our World in Data, ACRA, Golden Credit Rating

The vaccination process, which was launched in many countries at the onset of 2021, is not yet widespread enough to talk about the end of pandemic globally. The absolute frontrunners are Israel and the United Arab Emirates, where 118 and 91 doses per 100 people respectively have been administered as of April 10, 2021.

As of April 10, the United Kingdom and United States had managed to narrow the gap with the frontrunners with 58 doses and 55 doses per 100 people, respectively (Fig. 6). However, the average for the whole world is 10 doses per 100 people, which is far from sufficient to ensure the end of recurring lockdowns. The gap between the leaders and the average is primarily due to the speed of vaccination, which depends on peoples' trust in the vaccine(s) available in their countries, the size of population, and sufficiency of doses.

Figure 6. In our sample of countries the United Kingdom and United States are leading by number of doses of vaccine as of April 10, 2021

Israel and the United Arab Emirates are the clear leaders of the vaccination process, but they are not included in our sample.



Source: Our World in Data

Considering the speed of vaccination in the majority of countries, the probability of more severe waves of the pandemic (compared to the previous ones) cannot be excluded in the less vaccinated countries. Taking into account the striking difference in populations' resilience to the pandemic, we expect big diversity in the severity of quarantine measures and less coordination in the introduction of these measures globally in 2021. This may make economic recovery uneven this year. Henceforth, much depends on how fast the majority of countries are able to vaccinate their populations to curb the influence of the coronavirus on national economies.

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